Course Syllabus
Mathematical Preparation for Studying Economics
August 11 - August 21, 1997, 9:00 AM - 12:30 PM, daily
Econ 119

Instructor
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Office Hour: T & R: 12:30 PM - 1:30 PM.

Course Description:
This is a course in mathematical preparation for studying economics — Microeconomics, Macroeconomics, and Econometrics, etc. Basic mathematical tools and techniques that you will use most often in studying these courses will be reviewed.

Tentative Course topics:
I. Calculus
   A. Differentiation
      1. Chain Rule
      2. Implicit Differentiation
      3. Taylor's Expansion
   B. Limits
      1. Limit of a Function
      2. Limit of a Sequence
      3. Continuity and Differentiability
   C. Integration
      1. Indefinite Integrals
         a. Change of Variables
         b. Integration by Parts
      2. Definite Integrals
II. Linear Algebra
   A. Vector and Matrix Operations
   B. Taylor's Expansion with Functions from $R^k \rightarrow R^1$
III. Probability
   A. Random Variable
   B. Distribution Function
   C. Density Function and Relation to Distribution Function
   D. Expectation & Variance
Lectures
The course meets daily for three and half hours (less some break time) for nine days. Each day there will be some suggested exercises, these exercises will not be graded, but answers will be provided.

Examination
Participation in this course is not a compulsory part of the graduate program in economics, but passing its final exam is. The final exam will take place 9.00A.M. - 12.00 NOON on Thursday, August 21, 1997. A review session will be held on August 20.

Suggested Texts
Basic Calculus & Linear Algebra:
Salas, Hille, and Anderson: *Calculus: One and Several Variables*, 7th edition, John Wiley & Sons.

Probability:

I will not assume that you have any of these books. If you like having published material to supplement lecture notes, these are books to have.